

REMARKS

Claims 6-25 are pending in the present application. Claims 6, 7 and 13 have been amended. Claims 20-25 have been presented herewith.

Claim Rejections-35 U.S.C. 101

Claims 13-19 have been rejected under 35 U.S.C. 101, as allegedly being directed to non-statutory subject matter. The Examiner has alleged that the claims are not tied to a particular machine or apparatus, and also do not transform a particular article into a different state or thing. This rejection is respectfully traversed for the following reasons.

The Examiner has attempted to apply the machine-or-transformation test as set forth in *In re Bilski*, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008). Applicants however respectfully submit that claim 13 transforms a particular article, and thus should be considered as patent-eligible subject matter under 35 U.S.C. 101.

As acknowledged by the court in *In re Bilski*, the raw materials of many information-age processes are electronic signals and electronically manipulated data. The court in *In re Bilski* considered *In re Abele*, 684 F.2d 902 (CCPA 1982), which stated therein "That claim did not specify any particular type or nature of data; nor did it specify how or from where the data was obtained or what the data represented". The court in *In re Bilski* also stated "We further note for clarity that the electronic transformation of the data itself into a visual depiction in Abele was sufficient; the claim

was not required to involve any transformation of the underlying physical object that the data represented".

The mobile karaoke service method of claim 13 includes in combination among other features karaoke event data representative of karaoke events are stored along with song data, and sound is played responsive to the song data. Thus, it should be readily clear that the mobile karaoke service method of claim 13 transforms song data into sound, and should thus be considered as transforming a particular article in compliance with the machine-or-transformation test as set forth in *In re Bilski*, for at least these reasons.

The mobile karaoke service method of claim 13 further includes in combination among other features that an interrupt signal is generated responsive to synchronization data embedded within the song data. Thus, claim 13 features transformation of synchronization data as embedded within song data into an interrupt signal, and should thus be considered as transforming a particular article in compliance with the machine-or-transformation test as set forth in *In re Bilski*, for at least these additional reasons.

The mobile karaoke service method of claim 13 further includes in combination among other features executing karaoke events in accordance with the karaoke event data in time order in synchronization responsive to generation of the interrupt signal. Thus, claim 13 further features transformation of karaoke event data into karaoke events using an interrupt signal, and should be considered as transforming a particular

article in compliance with the machine-or-transformation test as set forth in *In re Bilski*, for at least these still further reasons.

In summary, claim 13 features transformation of stored karaoke event data into karaoke events, and also intermediately transformation of synchronization data embedded within song data into an interrupt signal.

Moreover, claim 13 specifies the particular type or nature of the data being stored as karaoke event data. The karaoke event data of claim 13 is specifically recited as representative of karaoke events, and thus depiction of a physical object. Contrary to the Examiner's assertion, the specific transformation of the karaoke event data into executed karaoke events is not merely insignificant extra-solution activity. That is, an interrupt signal is generated responsive to synchronization data embedded within song data in order to transform karaoke event data into executed karaoke events in time order, in synchronization. Accordingly, Applicants respectfully submit that claims 13-19 are in compliance with 35 U.S.C. 101, and that this rejection is improper for at least these reasons.

Claim Rejections-35 U.S.C. 112

Claims 6-12 have been rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement, and allegedly failing to comply with the enablement requirement. This rejection is respectfully traversed for the following reasons.

The Examiner has stated the following on page 4, lines 18-20 of the current Office Action dated March 19, 2009: "The examiner failed to find in the specification of such "sound generator" capable of performing the task of playing sound responsive to the song data **and** sending an interrupt signal". Applicants respectfully submit that the Examiner has failed to fully consider and appreciate the application as filed, and respectfully disagree with the Examiner's position for at least the following reasons.

As described on page 3, lines 7-8 of the application as filed, sound generator 102 as shown in Fig. 1 receives data from multimedia processor 101 and sends audio data to amplifier 108 or 109 for driving speaker 110 or head-phone jack 111. One of ordinary skill would thus readily understand that sound generator 102 plays sound responsive to song data provided from multimedia processor 101.

As further described on page 3, lines 20-21 of the present application (amended for the purpose of improving grammar and idiom in the Amendment dated May 12, 2006), the sound generator does not play music when receiving synchronization messages, but however responds to receiving synchronization messages by providing an interrupt signal indicating an occurrence of an event to the multimedia processor 101.

As also described on page 4, lines 10-12 of the application (amended for the purpose of improving grammar and idiom in the Amendment dated May 12, 2006), sound generator 102 plays back music via a sound reproduction interface when receiving audio data, but when receiving synchronization messages sound generator

102 sends the interrupt signal indicating event occurring timings to the multimedia processor without playing music.

Applicants respectfully submit that one of ordinary skill would readily comprehend that sound generator 102 in Fig. 1 of the present application receives song data from multimedia processor 101 and plays back music upon receipt thereof. However, upon receipt of the synchronization messages embedded within the song data, sound generator 102 does not play back music, but rather sends an interrupt signal indicative of an event occurring timing back to multimedia processor 101. Applicants thus respectfully submit that the specification does indeed reasonably convey possession of a sound generator capable of performing the task of playing sound responsive to song data and sending an interrupt signal, contrary to the Examiner's assertion. Claims 6-12 are thus in compliance with 35 U.S.C. 112, first paragraph.

If this rejection under 35 U.S.C. 112, first paragraph is to be maintained, the Examiner is respectfully requested to specifically establish on the record how it could be construed by one of ordinary skill that the application as noted above does not reasonably convey possession of a sound generator that plays sound responsive to song data and that sends an interrupt signal.

The Examiner has also asserted the following on page 5, lines 4-6 of the current Office Action dated March 19, 2009: "The teaching of a sound generator capable of playing music via a sound reproduction interface (specification) is not the same as a

sound generator that plays sound responsive to the song data (claim limitation)".

Applicants respectfully submit that this position as taken by the Examiner is unclear.

In particular, as noted above, sound generator 102 as described on page 3 of the present application receives data from multimedia processor 101, and sends audio data to amplifier 108 or 109 for driving the speaker 110 or headphone-jack 111, as shown in Fig. 1. Thus, claim 13 broadly features a sound generator that plays sound responsive to song data, and page 3 of the application may broadly be interpreted as describing such features. Applicants perceive no problem or discrepancy with respect to the specification and this claim language. The Examiner is respectfully requested to withdraw this above noted statement, or to at least clarify its meaning.

With still further regard to this rejection, the Examiner has asserted on page 5, lines 7-11 of the current Office Action dated March 19, 2009, that the specification does not enable a person skilled in the art to make and use the claimed invention without undue experimentation. The Examiner has asserted that it is unclear how a sound generator (understood by the Examiner narrowly as a vibrating object) is capable of performing both the task of playing sound responsive to song data and sending an interrupt signal to a multimedia processor. This rejection is respectfully traversed for the following reasons.

Although not necessarily limited thereto, sound generator 102, amplifiers 108 and 109, speaker 110 and headphone-jack 111 in Fig. 1 of the present application may collectively be broadly interpreted as the sound generator of claim 6.

Moreover, as described on page 6, lines 14-17 of the present application (amended for the purpose of improving completeness and consistency in the Amendment dated May 12, 2006), song data sent to sound generator 102 from multimedia processor 101 has synchronization data 1001-1005 embedded therein as shown in Fig. 10. The synchronization data is described as special data strings that can be read by the sound generator 102. For example, the data of MIDI channel 10 of note number 127 may be assigned as synchronization data. Upon recognition of note number 127, sound generator 102 generates and forwards an interrupt signal to multimedia processor 101.

Applicants respectfully submit that one of routine skill in the multimedia processing art would readily comprehend how a sound generator would be capable of recognizing a specific note number, and how such sound generator would be capable of providing a signal indicative thereof. Applicants thus respectfully submit that the specification enables a person of ordinary skill to make and/or use the claimed invention without undue experimentation, and thus is in compliance with 35 U.S.C. 112, first paragraph.

Claim Rejections-35 U.S.C. 102

Claims 6-19 have been rejected under 35 U.S.C. 102(e) as being anticipated by the Naples et al. reference (U.S. Patent Application Publication No. 2002/0162445). This rejection is respectfully traversed for the following reasons.

The mobile karaoke device of claim 6 includes in combination among other features a memory "that stores karaoke contents including karaoke event data in time order and song data, the song data having synchronization data embedded therein, and the karaoke event data being representative of karaoke events". Applicants respectfully submit that the Naples et al. reference as relied upon does not disclose these features.

The Examiner has alleged that paragraph 5 of the Naples et al. reference may be interpreted as disclosing song data having synchronization data embedded therein, as would be necessary to meet the above noted features of claim 6. However, paragraph [0005] of the Naples et al. reference as specifically relied upon by the Examiner merely describes that MIDI (musical instrument digital interface) was designed for recording and playback of digital audio content on synthesizers, and that MIDI streams do not represent audio content directly but provide information about how the content is to be synthesized. As further described in paragraph [0005] of the Naples et al. reference, each track of the MIDI stream includes discrete notes to be played by a particular instrument. A MIDI file is the computer equivalent of traditional sheet music for a particular song, and the files tend to be small and compact when compared to files which record audio content directly and continuously.

Applicants respectfully submit that paragraph [0005] of the Naples et al. reference as specifically relied upon by the Examiner do not describe or even remotely suggest song data having synchronization data embedded therein. Synchronization data in particular, and synchronization in general, are not described or even remotely

suggested with respect to paragraph [0005] of the Naples et al. reference as relied upon by the Examiner. It is inconceivable how paragraph [0005] of the Naples et al. reference explicitly discloses these features as alleged by the Examiner. If it is the Examiner's position or understanding that such a MIDI stream as very generally described in paragraph [0005] of the Naples et al. reference inherently includes synchronization data embedded in song data, the Examiner is requested to establish a specific teaching or showing thereof, and to in addition establish how such embedded synchronization data is used in the Naples et al. reference to provide an interrupt signal.

Applicants respectfully submit that paragraph [0005] of the Naples et al. reference as specifically relied upon by the Examiner does not disclose or even remotely suggest song data having synchronization data embedded therein. The Naples et al. reference as relied upon by the Examiner thus fails to meet all the features of claim 6. Applicants therefore respectfully submit that the mobile karaoke device of claim 6 distinguishes over the Naples et al. reference as relied upon by the Examiner, and that this rejection of claims 6-12 is improper for at least these reasons. **If this rejection is to be maintained, the Examiner is respectfully requested to clearly establish on the record how paragraph [0005] of the Naples et al. reference as specifically relied upon may be construed to disclose song data having synchronization data embedded therein.**

The mobile karaoke device of claim 6 further includes in combination among other features a sound generator that plays sound responsive to song data, the sound

generator "responding to receipt of the synchronization data embedded within the song data by sending an interrupt signal to said multimedia processor, said multimedia processor executing the karaoke events in accordance with the karaoke event data in time order in synchronization responsive to receipt of the interrupt signal". Applicants respectfully submit that the Naples et al. reference as relied upon by the Examiner does not disclose these features.

The Examiner has alleged that interrupt data – cue data; Fig. 15A and paragraph [0010] of the Naples et al. reference may be interpreted as the sound generator of claim 6. Applicants respectfully disagree for the following reasons.

Fig. 15A of the Naples et al. reference as specifically relied upon by the Examiner relates to a mapping process including receiving mapping of note values to audio clips, reading MIDI note values from a stream, mapping values to a clip reference, and outputting a MIDI stream with nominal MIDI note values replaced by corresponding clip references. Fig. 15A of the Naples et al. reference as specifically relied upon by the Examiner is described in paragraphs [0208] and [0209]. Fig. 15A and paragraphs [0208] and [0209] of the Naples et al. reference do not disclose or even remotely suggest synchronization data, synchronization data embedded within song data, or an interrupt signal. Fig. 15A and paragraphs [0208] and [0209] of the Naples et al. reference do not disclose or even remotely suggest cue data.

Moreover, paragraph [0010] of the Naples et al. reference merely describes that synthesizer control data is MIDI data, and that the digital samples are MP3 clips. The

virtual instrument pool includes cue data that specifies prompts coordinated with the audio content of the interactive part.

Applicants respectfully submit that paragraph [0010] of the Naples et al. reference as specifically relied upon does not disclose or even remotely suggest synchronization data, synchronization data embedded within song data, and an interrupt signal. Incidentally, paragraph [0181] of the Naples et al. reference describes cue display 82 with respect to Fig. 12A, whereby cue display 82 **prompts a user for input stimuli** during a live performance. Cue display 82 as further described in paragraph [0181] of the Naples et al. reference is not particularly characterized or disclosed as providing or including an interrupt signal, and more particularly is not described or even remotely suggested as providing or including an interrupt signal generated responsive to synchronization data embedded within song data, as would be necessary to meet the features of claim 6. The cue data within cue display 82 apparently prompts the user to sing or perform, and is not used by a multimedia processor to execute karaoke events in time order in synchronization in accordance with karaoke data. The Naples et al. reference as relied upon thus does not disclose all the features of claim 6. Applicants therefore respectfully submit that the mobile karaoke device of claim 6 distinguishes over the Naples et al. reference as relied upon by the Examiner, and that this rejection of claims 6-12 is improper for at least these additional reasons.

In the Response to Arguments section on page 10, lines 8-13 of the current

Office Action, the Examiner has asserted that "specifically sending an interrupt signal to interactive karaoke system responsive to synchronization data embedded within song data is the same as a conductor directing a musical performance by way of visible gestures. In Naples, the synchronization data is in the MIDI music file and the interrupt signal is sent to the interactive karaoke system to allow the music to be played in synchronization with the prompts, pictures and videos". Applicants respectfully disagree for the following reasons.

In particular, as noted above, the MIDI music file as described in paragraph [0005] of the Naples et al. reference does not disclose or even remotely suggest synchronization data embedded within song data. In absence of even remote mention of synchronization data in paragraph [0005] of the Naples et al. reference, and/or establishment by the Examiner as to how the MIDI streams in paragraph [0005] may be interpreted as including synchronization data embedded therein, it would appear that the Examiner has misinterpreted the Naples et al. reference or at the least has improperly attributed the system as including features and performing functions not described.

Moreover, the Examiner has apparently asserted that a conductor directing a musical performance by way of visible gestures may be interpreted as sending an interrupt signal to an interactive karaoke system responsive to synchronization data embedded within song data. However, this assertion by the Examiner is in direct contradiction to the Examiner's previous specific reliance upon the Naples et al.

reference as set forth on page 6 of the current Office Action. Moreover, such a hypothetical conductor as suggested by the Examiner could not be construed as sending an interrupt signal to a multimedia processor responsive to synchronization data embedded within song data. Accordingly, Applicants respectfully submit that the rejection of claims 6-12 in view of the Naples et al. reference is improper for at least these additional reasons.

The mobile karaoke service method of claim 13 includes in combination among features "storing karaoke contents including karaoke event data in time order and song data, the song data having synchronization data embedded therein, and the karaoke event data being representative of karaoke events". Applicants respectfully submit that the Naples et al. reference as relied upon by the Examiner does not disclose these features.

The Examiner has asserted that paragraph [0049] of the Naples et al. reference may be interpreted as disclosing song data having synchronization data embedded therein. However, paragraph [0049] of the Naples et al. reference merely describes that the data file contains additional content such as timing cues, lyrics, and other features, and that the additional content is time-correlated to the audio content for synchronous playback.

As emphasized previously, paragraph [0181] of the Naples et al. reference describes cue display 82 with respect to Fig. 12A, whereby cue display 82 **prompts the user for input stimuli** during a live performance. Cue display 82 does not provide or

include synchronization data embedded within song data. Moreover, although the additional content is described as time-correlated through the audio content for synchronous playback, the additional content is not specifically described as including synchronization data embedded within song data. That is, the additional content is merely timed with the audio content. Synchronization data in particular is not specifically described in paragraph [0049] of the Naples et al. reference. The timing cues are not described or even remotely suggested as embedded within song data. The Naples et al. reference as relied upon thus does not disclose all the features of claim 13. Applicants therefore further respectfully submit that the mobile karaoke service method of claim 13 distinguishes over the Naples et al. reference as relied upon by the Examiner, and that this rejection of claims 13-19 is improper for at least these reasons.

The mobile karaoke service method of claim 13 further includes in combination among other features "generating an interrupt signal responsive to the synchronization data embedded within the song data". Applicants respectfully submit that the Naples et al. reference as relied upon does not disclose these features.

The Examiner has alleged that Fig. 16 and paragraph [0005] of the Naples et al. reference may be interpreted as disclosing generation of an interrupt signal responsive to synchronization data embedded within song data. However, Fig. 16 of the Naples et al. reference merely relates to a MIDI mapping playback process including receiving mapping of note values to audio clips, passing the MIDI stream to a real time mapping

process, and playing audio clips specified in an output stream. The MIDI mapping playback process in Fig. 16 is specifically described in paragraph [0211] of the Naples et al. reference. However, paragraph [0211] of the Naples et al. reference does not disclose or even remotely suggest synchronization data, synchronization data embedded within song data, or generating an interrupt signal. Paragraph [0005] of the Naples et al. reference as further specifically relied upon merely generally describes MIDI streams, and also fails to disclose or even remotely suggest synchronization data, synchronization data embedded within song data, or generating an interrupt signal. The Naples et al. reference as relied upon by the Examiner thus does not meet all the features of claim 13. Applicants therefore respectfully submit that the mobile karaoke service method of claim 13 distinguishes over the Naples et al. reference as relied upon by the Examiner, and that this rejection of claims 13-19 is improper for at least these additional reasons.

Claims 20-25

The mobile karaoke service method for a mobile device of claim 20 includes somewhat similar features as claim 13. However, claim 20 features storing the karaoke contents in a memory, playing sound responsive to the song data and generating an interrupt signal responsive to the synchronization data embedded within the song data using a sound generator, and executing the karaoke events responsive to generation of the interrupt signal using a multimedia processor.

The mobile karaoke service method of claim 20 is thus tied to a particular machine (mobile device), and also is tied to a memory, a sound generator and a multimedia processor. Applicants therefore respectfully submit that claims 20-25 are in compliance with the machine-or-transformation test as noted previously, and thus should be construed as eligible subject matter under 35 U.S.C. 101.

Applicants also respectfully submit that the mobile karaoke service method of claim 20 distinguishes over the Naples et al. reference as relied upon by the Examiner for at least somewhat similar reasons as set forth above with respect to claim 13. Applicants therefore respectfully submit that claims 20-25 distinguish over the Naples et al. reference.

Conclusion

The Examiner is respectfully requested to reconsider and withdraw the corresponding rejections, and to pass the claims of the present application to issue, for at least the above reasons.

In the event that there are any outstanding matters remaining in the present application, please contact Andrew J. Telesz, Jr. (Reg. No. 33,581) at (571) 283-0720 in the Washington, D.C. area, to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment for any additional fees that may be required, or credit any overpayment, to Deposit Account No. 50-0238.

Respectfully submitted,

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